

BEFORE THE
Federal Communications Commission
WASHINGTON, D.C.

In the Matter of)	
)	
Empowering Parents and Protecting Children)	
in an Evolving Media Landscape)	MB Docket No. 09-194
)	

REPLY COMMENTS OF MOTOROLA, INC.

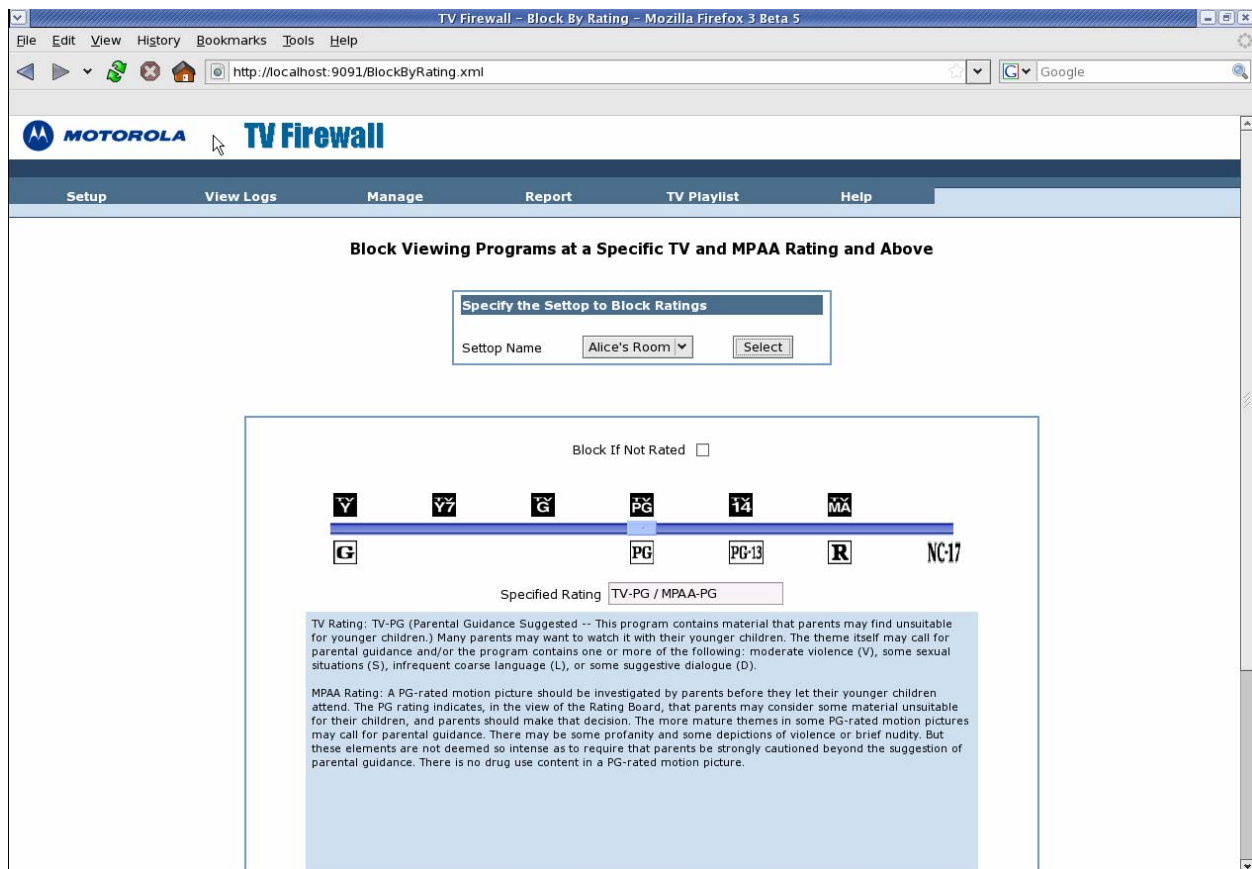
Motorola, Inc. (“Motorola”) hereby files these reply comments in response to the above-captioned Notice of Inquiry (“*Notice*”).¹ Motorola is pleased to take this opportunity to update the Commission and further describe TV Firewall, an advanced parental control product that can provide parents with a wide array of tools to manage what their children watch on television.² TV Firewall can be deployed with existing interactive cable set-top boxes and switched digital video (“SDV”) technology in cable headends. In addition to offering parents the advanced controls typically available now to MVPD subscribers, such as blocking by rating, by program title, and by channel, this innovative technology also provides several new benefits to MVPD subscribers, including a richer and more accessible user interface, additional block-by-time

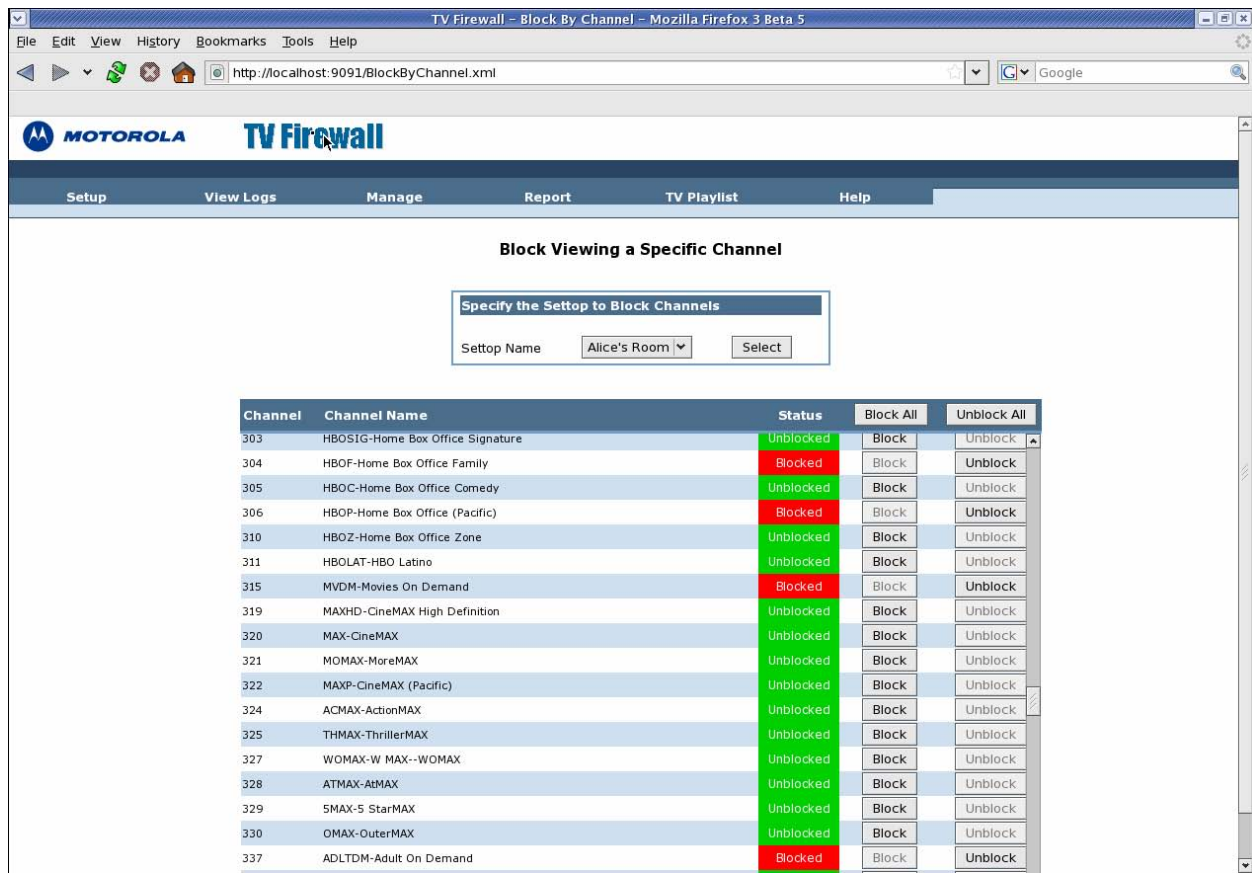
¹ *In re Empowering Parents and Protecting Children in an Evolving Media Landscape*, Notice of Inquiry, 24 FCC Rcd. 13171 (2009) (“*Notice*”).

² Motorola provided information on TV Firewall in its reply comments in the Child Safe Viewing Act Notice of Inquiry, *see* Reply Comments of Motorola, Inc., MB Dkt. No. 09-26 (May 18, 2009) (“Motorola CSVA Reply”), and the TV Firewall product was discussed in the Commission’s subsequent report. *See In re Implementation of the Child Safe Viewing Act; Examination of Parental Control Technologies*, Report, 24 FCC Rcd. 11413, ¶¶ 64-65, 197, 202-203 (2009).

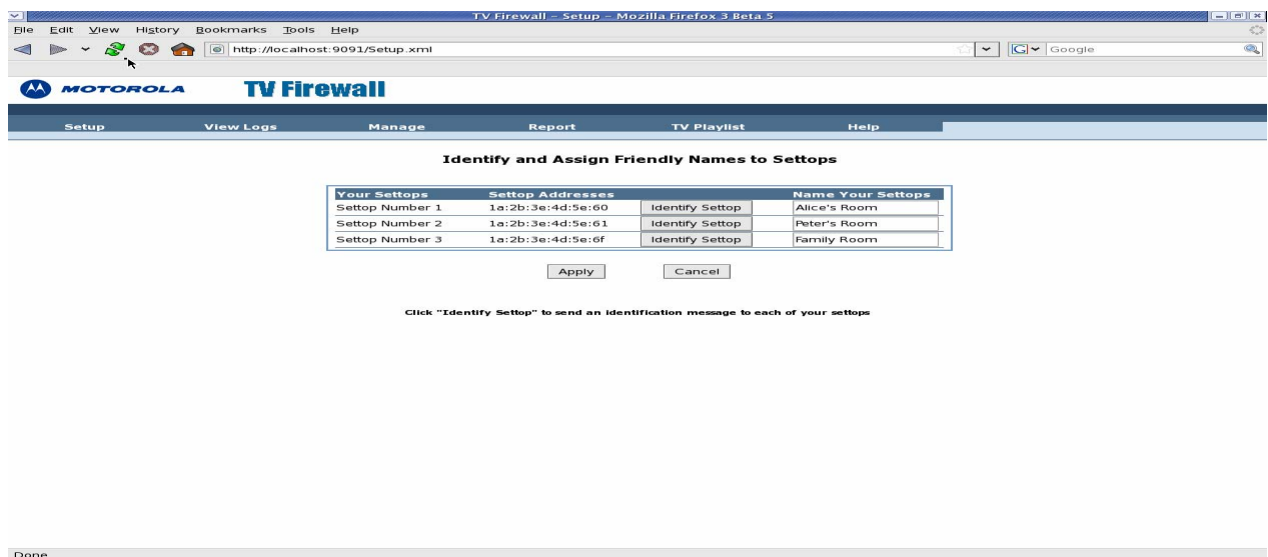
features, and a program logging feature. In addition, TV Firewall gives parents the opportunity to make affirmative viewing choices for their families, by supporting a playlist feature.

TV Firewall allows MVPD subscribers to configure parental controls via a convenient graphical user interface (“GUI”) that is available online. The GUI can be accessed, along with billing and other subscriber account information, from the user’s account on the MVPD’s website. Because TV Firewall is a server technology, rather than a set-top box technology, the GUI allows parental control configurations to be customized for each set-top box in the home. For example, a set-top box connected to the television in a child’s bedroom can be programmed to restrict more content than the set-top box connected to the television in the family room, as depicted below.





For ease of use, the GUI allows the user to name each set-top box in the house (*e.g.*, parents could label a set-top box in a child’s room “Alice’s Room” or “Peter’s Room”).



Parents may access the GUI from any device that can access the Internet, including from web-enabled mobile devices. Online access to the GUI gives parents the flexibility to set parental controls from wherever they are, whether at work, at a restaurant, or while traveling.

A subscriber using TV Firewall can set viewing time limits or quotas from the GUI. For example, a parent could limit viewing time by establishing certain time periods during which the child can watch TV (see depiction below). When the set-top attempts to access programming during the allowable window, access to the programming is allowed. When access is attempted during a prohibited period of time, the screen provides an informational message that the programming is blocked (*e.g.*, the screen may display a message indicating “viewing window exceeded” or “viewing not authorized at this time”).

Set Viewing Time Window

Specify the Settop to Set Viewing Time Window

Settop Name:

Day of Week	Start Time	End Time					
	Hour	Minute	AM/PM	Hour	Minute	AM/PM	
<input type="text" value="Saturday"/>	<input type="text" value="04"/>	<input type="text" value="00"/>	<input type="text" value="PM"/>	<input type="text" value="05"/>	<input type="text" value="00"/>	<input type="text" value="PM"/>	<input type="button" value="Add"/>
Sunday	11:00	AM		01:00	PM		<input type="button" value="Remove"/>
Monday	04:00	PM		05:00	PM		<input type="button" value="Remove"/>
Tuesday	04:00	PM		05:00	PM		<input type="button" value="Remove"/>
Wednesday	04:00	PM		05:00	PM		<input type="button" value="Remove"/>
Thursday	04:00	PM		05:00	PM		<input type="button" value="Remove"/>
Friday	04:00	PM		05:00	PM		<input type="button" value="Remove"/>
Saturday	11:00	AM		12:00	PM		<input type="button" value="Remove"/>
Saturday	04:00	PM		05:00	PM		<input type="button" value="Remove"/>

Another unique feature of TV Firewall is its ability to log the viewing activity of each set-top box and present the logs to the parent via the GUI. This feature allows the parent to confirm operation of the TV Firewall settings and to review a complete viewing history for each set-top box in the home, as depicted below.

The screenshot shows the Motorola Channel Usage Parent web interface. At the top, there's a navigation bar with 'Setup', 'Manage', 'View Log', 'Reports', and 'Search'. Below this, a dropdown menu shows 'Johnny's room' selected. The main content area displays a table of viewing logs. The table has columns for Date, Time, Channel, Channel ID, Program Name, Rating, and Events. The log shows various programs being watched, including 'Steve Harvey Show', 'Bargain Hunt', 'Young Guns II', 'Winnie the Pooh', 'Hanna Montana', 'Montel Williams', 'Family Guy', 'American Idol', 'Bones', 'Shawshank Redemption', 'Lethal Weapon 2', 'Girls Gone Wild', and 'Seeking Solutions with Susan'. Some entries are marked as 'Blocked by Firewall'.

Date	Time	Channel	Channel ID	Program Name	Rating	Events
3/21/2008	2:59 PM	301	TBS	Steve Harvey Show	TV-PG	
3/21/2008	2:59 PM	202	BBC	Bargain Hunt	TV-PG	
3/21/2008	2:59 PM	3	AMC	Young Guns II	TV-14	
3/21/2008	3:00 PM	12	DIS	Winnie the Pooh	TV-G	
3/21/2008	3:31 PM	12	DIS	Hanna Montana	TV-7	
3/21/2008	3:58 PM	502	Cinemax	Montel Williams	R	Blocked by Firewall
3/21/2008	6:32 PM	23	WPHL	Family Guy	TV-14	
3/21/2008	7:02 PM	23	WPHL	American Idol	TV-PG	
3/21/2008	8:00 PM	205	WTF	Bones	TV-14	
3/21/2008	9:44 PM	401	HBO	Shawshank Redemption	R	Blocked by Firewall
3/21/2008	9:45 PM	502	Cinemax	Lethal Weapon 2	R	Blocked by Firewall
3/21/2008	9:46 PM	800	PPV	Girls Gone Wild	X	
3/21/2008	10:19 PM	8	CBS	Seeking Solutions with Susan	TV-G	Web initiated force tune event
3/21/2008	10:20 PM	800	PPV	Girls Gone Wild	X	Web initiated force tune event & block
3/21/2008	10:21 PM	8	CBS	Seeking Solutions with Susan	TV-G	Web initiated force tune event

In addition, viewership logging is available anywhere and at any time and gives parents a real-time view of what their children are watching; in other words, the GUI allows parents to actually see which set-top boxes are on in their home and what programming each set-top box is tuned to.

TV Firewall utilizes SDV technology to implement these various blocking features,³ and can be supported in interactive cable set-top boxes with a minor software download. The

³ Within a cable headend, existing SDV server technology can be used to support TV Firewall, but a full SDV deployment would not be necessary to enable the capability. As Motorola has explained previously, *see* Motorola CSVA Reply at 7 n.11, SDV can be used for the delivery of programming channels to customers. In (footnote continued...)

parental control settings for each set-top box in the home are maintained in servers in the cable headend. When a child tunes to a particular channel, the set-top box will send an inquiry up to the servers in the cable headend to confirm that the set-top box is authorized to tune to that channel. If the parental control settings allow for viewing, then the headend servers send a message back to the set-top box to allow for the display of the channel. If, on the other hand, the settings do not permit viewing of that channel, the headend servers will send a message back to the set-top box that the channel has been blocked. In this latter case, the TV set will display a message such as “Channel blocked due to rating” or “Channel blocked by parental control.”

The flip side of blocking programming deemed inappropriate for children is empowering parents to provide access to programming that they want their children to view. With the playlist support feature on TV Firewall, parents can create a “white list” or “walled garden” for their children, allowing them to watch pre-selected programming. Using the GUI, a parent can select the programs that they want their child to view using an online EPG. The programs selected create a playlist for the set-top box. The TV Firewall will automatically tune the set-top box to the parent-approved programs in the playlist. An example playlist is shown below.

(...footnote continued)

contrast to the traditional cable architecture, in which all channels are typically delivered to all customers at all times regardless of whether anyone in a neighborhood is watching any given channel, SDV enables operators to allocate bandwidth based on usage levels. Channels that are heavily viewed continue to be delivered on a broadcast basis, while more lightly viewed channels can be delivered on an SDV basis, with no visible difference to the consumer. These techniques enable the cable network to be even more responsive to the preferences of its customers through more effective bandwidth utilization. TV Firewall can be implemented in a cable network independent of whether the operator elects to deliver individual programming channels on an SDV basis. In all events, given the clear public interest benefits of SDV, Motorola urges the Commission to continue to pursue policies that promote the deployment of SDV by cable operators. *See, e.g., In the Matter of Oceanic Time Warner Cable et al.*, Order on Review, 24 FCC Rcd. 8716, ¶ 13 (2009) (underscoring public interest benefits of SDV deployments).

3:00 PM	PBS	Clifford the Big Red Dog	TV-Y
3:30 PM	TOON	Tom & Jerry	TV-Y
4:00 PM	DISN	Winnie the Pooh	TV-Y
4:30 PM	PBS	Science Kids TV	TV-Y

Furthermore, when a parent is in a “walled garden” viewership window, TV Firewall offers the parent the ability to block or allow channel changes to other programming during this period.

As the record in this proceeding demonstrates, and as evidenced by Motorola’s continuing and innovative efforts to develop parental controls, consumer demand in today’s marketplace is producing an abundance of parental control technologies.

Respectfully submitted,

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March 26, 2010